

## ABSTRACT OF THE DISCLOSURE

An apparatus and method analyze overlay deviation in alignment between a first mark and a second mark that are formed on a substrate. In particular, a relationship between changes in overlay deviation values and changes in focus position of the substrate for a plurality of sets of the first and second marks that are provided on the substrate is calculated, and then an output is provided from which a user can determine whether the substrate suffers from wafer-induced-shift. Preferably, the output is a vector-map showing the relationship between changes in overlay deviation values and changes in focus position of the substrate for the plurality of sets of marks.